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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,688	02/14/2001	Peter L. Chu	PA1474US	4538

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EXAMINER

PHU, PHUONG M

ART UNIT PAPER NUMBER

2631

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/784,688

Applicant(s)

CHU, PETER L.

Examiner

Phuong Phu

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 11, 15-18, 22-26, 32 and 34-38 is/are allowed.
- 6) ☒ Claim(s) 4-7, 12-14, 19-21, 27-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 1-3, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2,3</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: it appears that the limitation " $X_j^f = \dots a_n^f X_{j-n}$ " on line 16 should follow the limitation "according to the equation:" on line 17. Appropriate correction is required. Claims depended on claim 1 are, therefore, also objected.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4-7, 12-14, 19-21, 27-31 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 4 recites the limitation "the filter tap coefficients  $a_1^f$  is updated ...  $F_2$  being a nonlinear function" on lines 3-12. This limitation is not disclosed in the specification of the instant application.

Similarly, in claims 12, 19, 27 and 33, the limitation "the filter tap coefficients  $a_1^f$  is updated ...  $F_2$  being a nonlinear function" is not disclosed in the specification of the instant application.

Claims, (if any) depended on above claims, are therefore also rejected.

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4-7, 12-14, 19-21, 27-31 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitations “the filter tap coefficient  $a_1^f$ ” on line 3 and the filter tap coefficient  $a_2^f$ ” on line 8. It is unclear whether these limitations refer to “filter tap coefficient  $a_n^f$  corresponding to the whitening  $F_e$ ” on line 19 and 20 of claim 1 or refer to “filter tap coefficient  $a_n^f$  corresponding to the whitening  $F_d$ ” on line 45 and 46 of claim 1.

Claim 4 recites the parameters “ $a_1^{fj+1}$ ” on line 5, “ $a_2^{fj+1}$ ” and “ $a_1^{fj}$ ” on line 10. These parameters are not defined in the claim.

Similarly, in claims 12, 19, 27 and 33, the parameters “ $a_1^{fj+1}$ ”, “ $a_2^{fj+1}$ ” and “ $a_1^{fj}$ ” are not defined in the claims.

Claims, (if any) depended on above claims, are therefore also rejected.

#### ***Allowable Subject Matter***

6. Claims 10, 11, 15-18, 22-26, 32, 34-38 are allowed.
7. Claims 1-3, 8 and 9 would be allowable if rewritten or amended to overcome the objection, set forth in this Office action.

#### ***Conclusion***

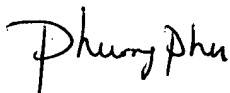
8. References (4,860,315), (4,518,950), (4,554,670) and (4,475,227) are cited because they are pertinent to the claimed invention.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 703-308-0158. The examiner can normally be reached on M-F (8:30-6:00) First Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 703-306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phuong Phu  
04/23/04

Phuong Phu  
Primary Examiner  
Art Unit 2631

**PHUONG PHU  
PRIMARY EXAMINER**